REMARKS

Claims 23, 29 and 35 have been amended by incorporating the text of claims 26, 32 and 35 into them, respectively: that is, they have been amended to require the thickness of the tungsten or molybdenum layer to be between 30 nm and 500 nm. Also, claims 26, 32 and 38 have been amended to specify that the thickness of the tungsten or molybdenum layer is between 70 nm and 500 nm. Support for these amendments exists, *inter alia*, at page 6, line 20. No new matter has been added through these amendments.

Claims 23, 25-29 and 31-43 are currently pending.

The Office Action rejected claims 23, 24, 26-30, 32-36 and 38-43 under 35 U.S.C. § 102 as anticipated by, or in the alternative under 35 U.S.C. § 103 as obvious over, three references: (1) U.S. patent 4,198,667 ("Lazzari"); (2) U.S. patent 5,071,787 ("Mori"); and/or (3) U.S. patent 5,489,372 ("Hirano"). The Examiner has also rejected claims 25 and 31 under 35 U.S.C. § 103 as obvious over (a) Lazzari in view of U.S. patents 4,005,454, 6,047876, or 6,231,693 and (b) Mori in view of U.S. patents 4,386,987 or 5,091,765. In view of the following comments, Applicant respectfully requests reconsideration and withdrawal of these rejections.

The claimed invention requires the presence of a tungsten or molybdenum layer having a thickness between 30 nm and 500 nm (between 70-500 nm for claims 26, 32 and 38) which has a copper or silver layer in direct contact with it. The cited art neither teaches nor suggests the required layers.

Hirano neither teaches nor suggests a tungsten or molybdenum layer having a thickness between 30 nm and 500 nm. This is recognized by the Office Action which did not reject claims 26, 32 and 38 over Hirano. Thus, all of the claims as amended are free of Hirano.

Similarly, Mori neither teaches nor suggests the claimed invention. For example, Mori neither teaches nor suggests a glass substrate having at least one metal layer based on tungsten or molybdenum on it, where the tungsten or molybdenum layer is **in direct contact with** a copper or silver layer (as required by the claims). Rather, Mori discloses an object having a Ni-plating layer between the ITO layer and the Cu solder layer. (See, col. 4, lines 13-24). Accordingly, all of the pending claims are free of Mori.

Finally, with respect to Lazzari, Lazzari does not disclose a tungsten or molybdenum layer having a thickness between 30 nm and 500 nm. Rather, Lazzari discloses (at col. 7, lines 6-7) a chromium layer. There is no teaching or suggestion in Lazzari concerning the appropriate thickness for a hypothetical tungsten or molybdenum layer. For this reason alone, the rejections based upon Lazzari are improper and should be withdrawn.

Moreover, with respect to claims 26, 32 and 38, Lazzari also fails to teach or suggest the required thickness in a layer made from any material, let alone the required tungsten or molybdenum materials. The fact that Lazzari states that "a very shallow layer of chromium" is used (col. 7, lines 6-7) teaches away from expanding the thickness of this very shallow layer to yield layers having the thickness required in these claims. For this reason as well, claims 26, 32 and 38 are free of Lazzari.

The claimed invention relates to glass substrates and/or float glass. The production of such materials occurs at conditions particular for these products. For example, the temperature and pressure conditions within a float glass chamber are conditions suitable for producing glass products. When CVD is used to coat such glass products, temperature and pressure conditions are suitable for such CVD processes to occur (for example, high temperatures of about 600-800°C are used in CVD processes for float glass to improve properties such as crystallinity, homogeneity and electrical properties of the deposited layer). Thus, relevant processes for purposes of the claimed invention are those related to glass production. None of the cited art relates to such processes or to production of such glass products. That is, the cited art is non-analogous art: one skilled in the art, seeking methods for producing suitable glass products such as those being claimed, would not be motivated to turn to the cited art for answers.

Specifically, Lazzari relates to a magnetic head platform; Mori relates to a semiconductor device; and Hirano relates to a solar cell on which the particles are deposited by a bath process. None of these references relate to a glass product or methods of producing glass products.

This distinction is significant because the methods disclosed in the cited art neither teach nor suggest anything about glass products or the production of such products. For example, the temperature and pressure conditions used to produce a magnetic head platform, a semiconductor device, or a solar cell are not analogous to conditions within a float glass chamber. Nor are the size of the products being produced or the types of processes being used analogous, particularly in connection with the production of semiconductors (batch vs. continuous processes).

The claimed invention relates to unique glass products. These products have improved mechanical and chemical properties as compared to other glass products. For example, the crystalline nature and hardness of the claimed glass products are improved, and the thickness and resistivity of the layers on the claimed glass products are susceptible to better control.

Nothing in any of the cited art teaches or suggests how to obtain the claimed glass products having such improved properties. Accordingly, nothing in the cited art teaches or suggests the claimed invention.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the pending rejections.

Applicant believes that the present application is in condition for allowance. Prompt and favorable consideration is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Richard L. Treanor
Attorney of Record
Registration No. 36,379

Jeffrey B. McIntyre
Registration No. 36,867

Customer Number
22850

Tel #: (703) 413-3000
Fax #: (703) 413-2220